

extent of the fine grinding surface, means to bring said dressing material and the outer radial extent of the fine grinding surface into physical contact,

movement means to move said dressing material and the fine grinding surface relative to one another and,

means to flex the [outside] outer radial extent of the grinding surface to form a concave surface during operation of said movement means to provide a flat to convex shape to the fine grinding surface.

Claims 3-12. Previously cancelled.

Claim 13 (amended once). In a system utilizing a fine grinding wheel, the wheel having a fine grinding surface with a radial extent to an outside diameter,

the improvement of a dressing wheel system, the dressing wheel system including dressing material, said dressing material having a radial extent less than the radial extent of the fine grinding surface, means to bring said dressing material and the radial extent of the fine grinding surface into physical contact,

and movement means to move said dressing material and the fine grinding surface relative to one another to dress the fine grinding surface to a convex shape.

Claim 14. The system of claim 13 characterized in that said convex shape includes a taper.

Claim 15. The system of claim 14 characterized in that said convex shape includes at least one step.

Claim 16. The system of claim 13 characterized in that said convex shape is a curved shape.

Claims 17-23. Previously cancelled.

Claim 24 (amended once). In a system utilizing a fine grinding wheel, the wheel having a fine grinding surface with a radial extent to an outside diameter, the system having a production carrier assembly including planet gears and a pinion drive,

the improvement of a dressing wheel system, the dressing wheel system including dressing material, said dressing material having a radial extent less than the radial extent of the fine grinding surface, means to bring said dressing material and the radial extent of the fine grinding surface into physical contact,

movement means to move said dressing material and the fine grinding surface relative to one another to provide a convex shape to the fine grinding surface,

said movement means utilizing at least part of the production carrier assembly and the pinion drive, and said convex shape including a taper.

Claim 25. The system of claim 24 characterized in that said convex shape includes at least one step.

Claim 26 (amended once). In a system utilizing a fine grinding wheel, the wheel having a fine grinding surface with a radial extent to an outside diameter, the system having a production carrier assembly including planet gears and a pinion drive,

the improvement of a dressing wheel system, the dressing wheel system including dressing material, said dressing material having a radial extent less than the radial extent of the fine grinding surface, means to bring said dressing material and the radial extent of the fine grinding surface into physical contact,

movement means to move said dressing material and the fine grinding surface relative to one another to provide a convex shape to the fine grinding surface,

said movement means utilizing at least part of the production carrier assembly and the pinion drive, and said convex shape is a curved shape.

Claim 27. Previously cancelled.

Claim 28. In a system utilizing a grinding wheel, the improvement of a dresser and movement means to move said dresser in respect to the grinding wheel.

Claim 29 (first amendment). A method for dressing a fine grinding wheel, the wheel having a fine grinding surface with a total radial extent to an outside diameter, method comprising bringing dressing material and the outside diameter of the fine grinding surface into physical contact with (said dressing material having a dressed radial extent less than the total radial extent of the fine grinding surface,) and moving said dressing material and the fine grinding surface relative to one another to provide a [flat to] convex shape to (said dressed radial extent of the fine grinding surface.)

Claim 30 (first amendment). (In a system utilizing a rotary fine grinding wheel, the rotary wheel having a solid

fine grinding surface with an outer extent neighboring an
outside circumference with an outer extent extending from 0-100
of the rotary fine grinding wheel, the improvement of the outer
20-40% of the outer extent of the solid fine grinding wheel
having a convex shape.)

Claim 31 (first amendment). [The system of claim 30
characterized in that] In a system utilizing a fine grinding
wheel, the wheel having a fine grinding surface with an outer
extent neighboring an outside circumference,

the fine grinding wheel [is] being used in a system
having a production assembly, the improvement of the outer
20-40% of the outer extent of the fine grinding wheel having a
convex shape,

and [the] said outer 20-40% of the outer extent of
the grinding wheel [is] being dressed to said convex shape
utilizing at least part of the production assembly.

Claim 32. The system of claim 31 characterized in
that the fine grinding wheel is dressed by differential
movement means and said differential movement means including
at least part of the production assembly.

Claim 33. The system of claim 32 characterized in that said differential movement means includes planet gears.

Claim 34. The system of claim 33 wherein the system includes a production assembly having a pinion drive gear and characterized by said differential movement means of said dressing wheel system utilizes the pinion drive gear.

Claim 35. The system of claim 34 wherein the pinion drive has a gear with a diameter and characterized in that said differential movement means includes an intermediate pinion extender gear, and said extender gear increasing the apparent diameter of the pinion drive gear.

Claim 36. The system of claim 31 wherein the system includes a production assembly having a pinion drive gear having a diameter and a stationary outer ring, and characterized by said differential movement means of said dressing wheel system utilizing the pinion drive gear,

said differential movement means also including an intermediate pinion extender gear, said extender gear increasing the apparent diameter of the pinion drive gear,

said differential movement means utilizing the stationary outer ring, planet dresser wheels, means to connect

said dressing material to said planet dresser wheels, and said planet dresser wheels being drivingly located between said extender gear and the stationary outer gear.

Claim 37. The system of claim 31 wherein the fine grinding surface is formed of cutting materials embedded in a carrier and characterized by the dressing wheel system including removal means to remove the carrier to expose the cutting materials.

Claim 38. The system of claim 37 characterized in that said differential movement means includes planet gears and means selectively to insert said removal means to said planet gears.

Claim 39 (first amendment). [The system of claim 30 characterized in that] In a system utilizing a fine grinding wheel, the wheel having a fine grinding surface with an outer extent neighboring an outside circumference,
the improvement of the outer 20-40% of the outer extent of the fine grinding wheel having a convex shape, and
said convex shape includes a taper.